ABSTRACT.

The present invention provides for a method and apparatus for the detection and prevention of and recovery from bogus branch predictions in a microprocessor. Micro-ops, decoded from a macro instruction, are stored in a decoded micro-op cache. Branch prediction logic determines whether a branch is bogus or not. If the branch taken was determined to be bogus, the present invention causes the micro-ops which descend from the original bogus branch micro-op instruction to be flagged and subsequently moved to the back-end of the processor for retirement. Further, the branch prediction logic (the branch prediction logic storage buffer) is updated as to what the actual direction of the branch was. In this manner then, bogus branches are detected, recovered from and further prevented.